

Specifications



Eaton 222978

Eaton Moeller® series T5B Main switch, T5B, 63 A, surface mounting, 3 contact unit(s), 3 pole, 2 N/O, 1 N/C, Emergency switching off function, With red rotary handle and yellow locking ring

General specifications

PRODUCT NAME	Eaton Moeller® series T5B Main switch
CATALOG NUMBER	222978
EAN	4015082229788
PRODUCT LENGTH/DEPTH	240 mm
PRODUCT HEIGHT	204 mm
PRODUCT WIDTH	160 mm
PRODUCT WEIGHT	1.358 kg
CERTIFICATIONS	CSA-C22.2 No. 94 CSA Class No.: 3211-07 CSA-C22.2 No. 60947-4-1-14 UL 60947-4-1 UL CE IEC/EN 60204 CSA File No.: 012528 VDE 0660 CSA IEC/EN 60947 UL Category Control No.: NLRV IEC/EN 60947-3 UL File No.: E36332
CATALOG NOTES	Rated Short-time Withstand Current (Icw) for a time of 1 second
MODEL CODE	T5B-3-15159/I4/SVB

Features & Functions

FEATURES	Version as maintenance- /service switch
	Version as emergency stop installation
	Version as main switch
FITTED WITH:	Red rotary handle and yellow locking ring
FUNCTIONS	Interlockable Emergency switching off function
NUMBER OF POLES	3

General

DEGREE OF PROTECTION	NEMA 12
DEGREE OF PROTECTION (FRONT SIDE)	IP65
LIFESPAN, MECHANICAL	500,000 Operations
MOUNTING METHOD	Surface mounting
MOUNTING POSITION	As required
NUMBER OF CONTACT UNITS	3
OPERATING FREQUENCY	1200 Operations/h
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PRODUCT CATEGORY	Main switch
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 61140
SAFETY PARAMETER (EN ISO 13849-1)	B10d values as per EN ISO 13849-1, table C.1
SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27, Half- sinusoidal shock 20 ms
SUITABLE FOR	Branch circuits, suitable as motor disconnect, (UL/CSA) Ground mounting
SWITCHING ANGLE	90 °

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
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AMBIENT OPERATING TEMPERATURE - MAX	40 °C
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AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
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AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
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CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
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Terminal capacities

TERMINAL CAPACITY	1 x (2.5 - 35) mm ² , solid or stranded 2 x (1.5 - 10) mm ² , flexible with ferrule to DIN 46228 1 x (1 - 25) mm ² , flexible with ferrules to DIN 46228 12 - 4 AWG, solid or flexible with ferrule 2 x (2.5 - 16) mm ² , solid or stranded
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SCREW SIZE	M6, Terminal screw
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TIGHTENING TORQUE	4 Nm, Screw terminals 35.4 lb-in, Screw terminals
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Electrical rating

**RATED BREAKING
CAPACITY AT 220/230 V** 520 A
(COS PHI TO IEC 60947-3)

**RATED BREAKING
CAPACITY AT 400/415 V** 600 A
(COS PHI TO IEC 60947-3)

**RATED BREAKING
CAPACITY AT 500 V (COS
PHI TO IEC 60947-3)** 480 A

**RATED BREAKING
CAPACITY AT 660/690 V** 340 A
(COS PHI TO IEC 60947-3)

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 51 A
220 V, 230 V, 240 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 41 A
380 V, 400 V, 415 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 33 A
500 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 17 A
660 V, 690 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-21,** 63 A
440 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 63 A
230 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 63 A
400 V, 415 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 33 A
500 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 23.8 A
690 V

**RATED OPERATIONAL
CURRENT (IE) AT DC-1,
LOAD-BREAK SWITCHES
L/R = 1 MS** 63 A

**RATED OPERATIONAL
CURRENT (IE) AT DC-13,
CONTROL SWITCHES L/R
= 50 MS** 25 A

**RATED OPERATIONAL
CURRENT (IE) AT DC-23A,** 50 A

Short-circuit rating

**RATED CONDITIONAL
SHORT-CIRCUIT CURRENT** 2 kA
(IQ)

**RATED SHORT-TIME
WITHSTAND CURRENT** 1.3 kA
(ICW) 1,3 kA, Contacts, 1 second

**SHORT-CIRCUIT CURRENT
RATING (HIGH FAULT)** 100 A, Class J, max. Fuse,
SCCR (UL/CSA)
10 kA, SCCR (UL/CSA)

**SHORT-CIRCUIT
PROTECTION RATING** 80 A gG/gL, Fuse, Contacts

24 V	
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 48 V	50 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V	50 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 240 V	20 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 220/230 V	63 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 380/400 V	63 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 500 V	57.2 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 690 V	29.4 A
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	22 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	22 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	15 kW
RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ	18.5 kW
RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ	30 kW
RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ	22 kW
RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ	22 kW
RATED OPERATIONAL POWER STAR-DELTA AT 220/230 V, 50 HZ	18.5 kW
RATED OPERATIONAL	30 kW

POWER STAR-DELTA AT 380/400 V, 50 HZ	
RATED OPERATIONAL POWER STAR-DELTA AT 500 V, 50 HZ	37 kW
RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ	22 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	63 A
UNINTERRUPTED CURRENT	Rated uninterrupted current I _u is specified for max. cross-section.

Switching capacity

LOAD RATING	1.3 x I _e (with intermittent operation class 12, 60 % duty factor)
	2 x I _e (with intermittent operation class 12, 25 % duty factor)
	1.6 x I _e (with intermittent operation class 12, 40 % duty factor)
NUMBER OF CONTACTS IN SERIES AT DC-23A, 24 V	1
NUMBER OF CONTACTS IN SERIES AT DC-23A, 48 V	2
NUMBER OF CONTACTS IN SERIES AT DC-23A, 60 V	3
NUMBER OF CONTACTS IN SERIES AT DC-23A, 120 V	3
NUMBER OF CONTACTS IN SERIES AT DC-23A, 240 V	6
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	63 A, Rated uninterrupted current max. (UL/CSA)
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)	800 A
VOLTAGE PER CONTACT PAIR IN SERIES	60 V

Motor rating

ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	3 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 1-PHASE	7.5 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	15 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	10 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	15 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	40 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	40 HP

Contacts

CONTROL CIRCUIT RELIABILITY	1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
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NUMBER OF AUXILIARY CONTACTS (CHANGE- OVER CONTACTS)	0
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NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	1
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NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	3
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Actuator

ACTUATOR COLOR	Red
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ACTUATOR TYPE	Door coupling rotary drive
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Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0 W
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HEAT DISSIPATION CAPACITY PDISS	0 W
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HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	4.5 W
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RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	63 A
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STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
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10.2.2 CORROSION RESISTANCE	Meets the product standard's requirements.
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10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
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10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT	Meets the product standard's requirements.
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10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS	Meets the product standard's requirements.
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10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION	UV resistance only in connection with protective shield.
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10.2.5 LIFTING	Does not apply, since the entire switchgear needs to be evaluated.
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10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to be evaluated.
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10.2.7 INSCRIPTIONS	Meets the product standard's requirements.
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10.3 DEGREE OF PROTECTION OF ASSEMBLIES	Does not apply, since the entire switchgear needs to be evaluated.
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10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
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10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to be evaluated.
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10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to be evaluated.
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS	Is the panel builder's responsibility.
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	Is the panel builder's responsibility.
10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH	Is the panel builder's responsibility.
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	Is the panel builder's responsibility.
10.10 TEMPERATURE RISE	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 SHORT-CIRCUIT RATING	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 ELECTROMAGNETIC COMPATIBILITY	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 MECHANICAL FUNCTION	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Resources

BROCHURES

[Brochure - T Rotary Cam switch and P Switch-disconnector](#)

CATALOGUES

[P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN](#)

DECLARATIONS OF CONFORMITY

[DA-DC-00004897.pdf](#) [DA-DC-00004925.pdf](#)

DRAWINGS

[eaton-rotary-switches-padlock-t0-main-switch-dimensions.eps](#)

	eaton-rotary-switches-surface-mounting-t5b-main-switch-dimensions-002.eps eaton-general-switch-t0-main-switch-symbol.eps eaton-rotary-switches-t0-main-switch-symbol.eps eaton-general-totally-insulated-t0-main-switch-symbol.eps
ECAD MODEL	ETN.222978.edz
INSTALLATION INSTRUCTIONS	IL03801009Z
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CS-bauform13 DA-CD-bauform13
PRODUCT NOTIFICATIONS	MZ008005ZU_Orderform_Customized_Switch.pdf MZ008006ZU_Orderform_Customized_Switch.pdf
WIRING DIAGRAMS	eaton-rotary-switches-t0-main-switch-wiring-diagram-002.eps eaton-rotary-switches-t0-main-switch-wiring-diagram.eps

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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